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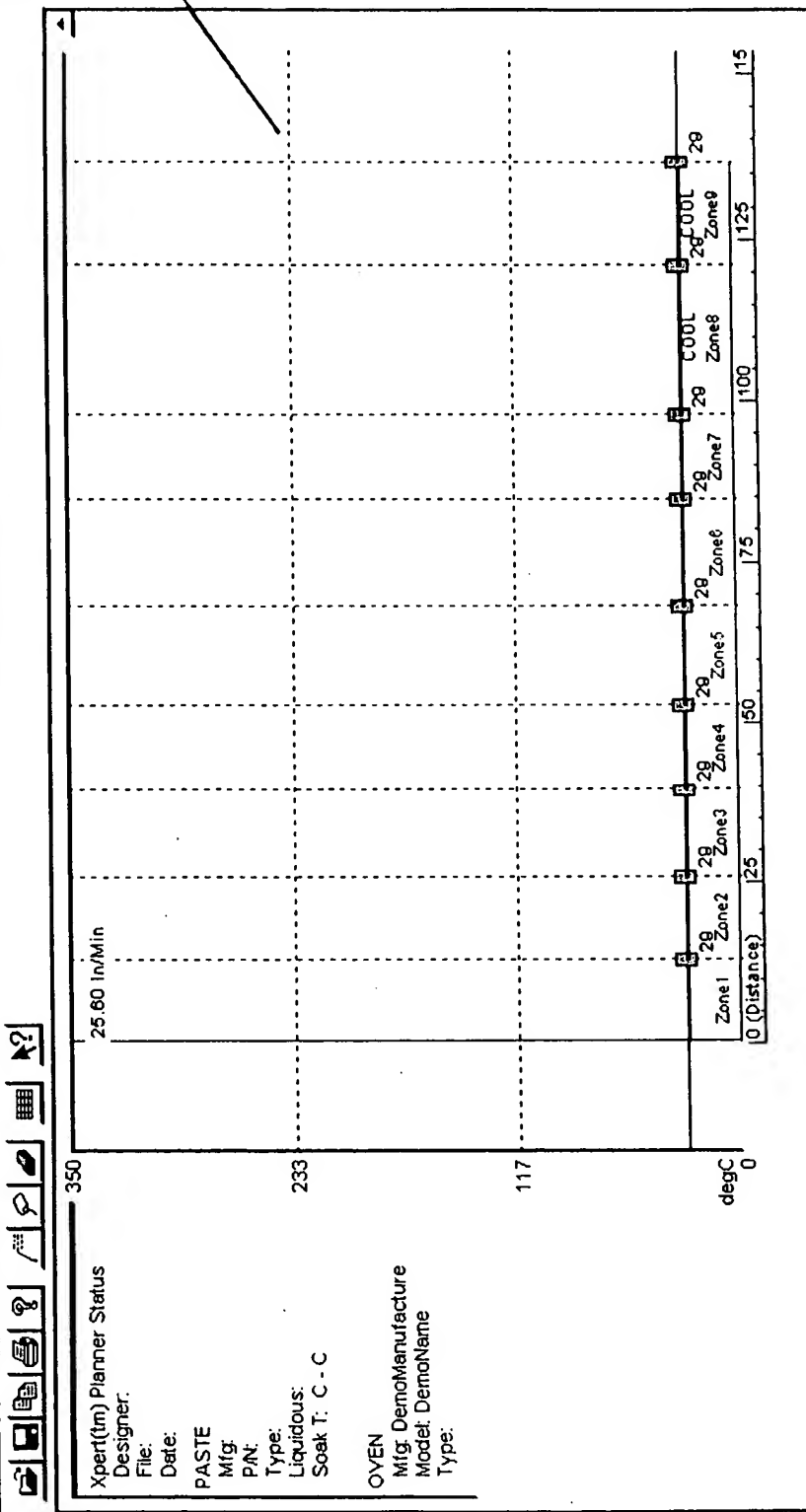
- BLACK BORDERS
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AutoM.O.L.E. - Xpert DEMO V5.01b - [XMSample]  
 File View Profile Tools Help



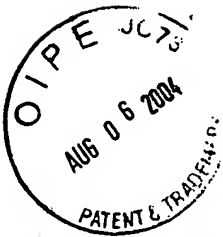
Xpert(tm) Planner Status  
 Designer:  
 File:  
 Date:  
 PASTE  
 Mfg:  
 P/N:  
 Type:  
 Liquidous:  
 Soak T: C - C  
 OVEN  
 Mfg: DemoManufacture  
 Model: DemoName  
 Type:

|                           |      |         |              |              |                 |                |
|---------------------------|------|---------|--------------|--------------|-----------------|----------------|
| Target Profile            | Peak | Minimum | Max (+)Slope | Max (-)Slope | Time Above 183C | Time -18C--18C |
| 29.4                      | 29.4 | 29.4    | 0.00         | 0.00         | 0.0             | 0.0            |
| Zone Slopes Summary State |      |         |              |              |                 |                |
| 1. Plan 2. Set & Verify   |      |         |              |              |                 |                |
| Welcome! Spreadsheet      |      |         |              |              |                 |                |

X= 75.9 in Y=68C

FIG. 9

121 117 119



Jeffrey B. Haendler  
Application No. 10/043,728 Filed: January 9, 2002  
Our Ref. No. 948-58343  
Art Unit: 1725  
For: CONVEYOR OVEN PROFILING SYSTEM  
Inventor(s): Austen et al.

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Profile Generator

Paste

Manufacturer - P/N - Type - Liquidbus

Alpha Metals - Ultraprint 78(Ag) - NC 179

|       | Ideal   |  | Nominal   |  | User Set |  | Ideal     |  | Units     |  | Robust    |  |
|-------|---------|--|-----------|--|----------|--|-----------|--|-----------|--|-----------|--|
|       | Slope   |  | (Deg/Sec) |  | (Deg C)  |  | (Deg/Sec) |  | (Deg/Sec) |  | (Deg/Sec) |  |
| Ramp  | Begin T |  | 30        |  | 120      |  | 1.5       |  | 1.5       |  | 1.5       |  |
|       | End T   |  | 120       |  |          |  |           |  |           |  |           |  |
|       | Time    |  |           |  |          |  | 60.0      |  | (Seconds) |  | 60.0      |  |
| Soak  | Slope   |  | (Deg C)   |  | 120      |  | 1.5       |  | (Deg/Sec) |  | 0.4       |  |
|       | Begin T |  | 120       |  | 120      |  |           |  |           |  |           |  |
|       | End T   |  | 160       |  |          |  |           |  |           |  |           |  |
| Spike | Time    |  | (Seconds) |  | 75       |  | 75.0      |  | (Seconds) |  | 98.9      |  |
|       | Slope   |  | (Deg/Sec) |  | 1.50     |  | 1.5       |  | (Deg/Sec) |  | 0.8       |  |
|       | Begin T |  | (Deg C)   |  | 160      |  |           |  |           |  |           |  |
|       | Peak T  |  | (Deg C)   |  | 218      |  | 38.7      |  | (Seconds) |  | 69.4      |  |
|       | Time    |  |           |  |          |  |           |  |           |  |           |  |

|        |            |  |           |  |       |  |      |  |           |  |      |  |
|--------|------------|--|-----------|--|-------|--|------|--|-----------|--|------|--|
| Liquid | Peak T     |  | (Deg C)   |  | 218   |  | 1.5  |  | (Deg/Sec) |  | 0.8  |  |
|        | Liquidous  |  | (Deg C)   |  | 179   |  |      |  |           |  |      |  |
|        | Slope      |  | (Deg/Sec) |  | 1.50  |  | 52.0 |  | (Seconds) |  | 93.3 |  |
| Conv   | Time Above |  | (Seconds) |  | 52    |  |      |  |           |  |      |  |
|        | Length     |  | (cm)      |  | 247.4 |  | 85.5 |  | (cm/Mn)   |  | 55.0 |  |
|        | Speed      |  | (cm/Mn)   |  | 85.5  |  | 33.7 |  | (In/Mn)   |  | 25.6 |  |

Print

Draw Paste Specification

Clear

Smoothing

Apply

Zone Slopes

Summary Stats

1. Plan

2. Set & Verify

Spreadsheet

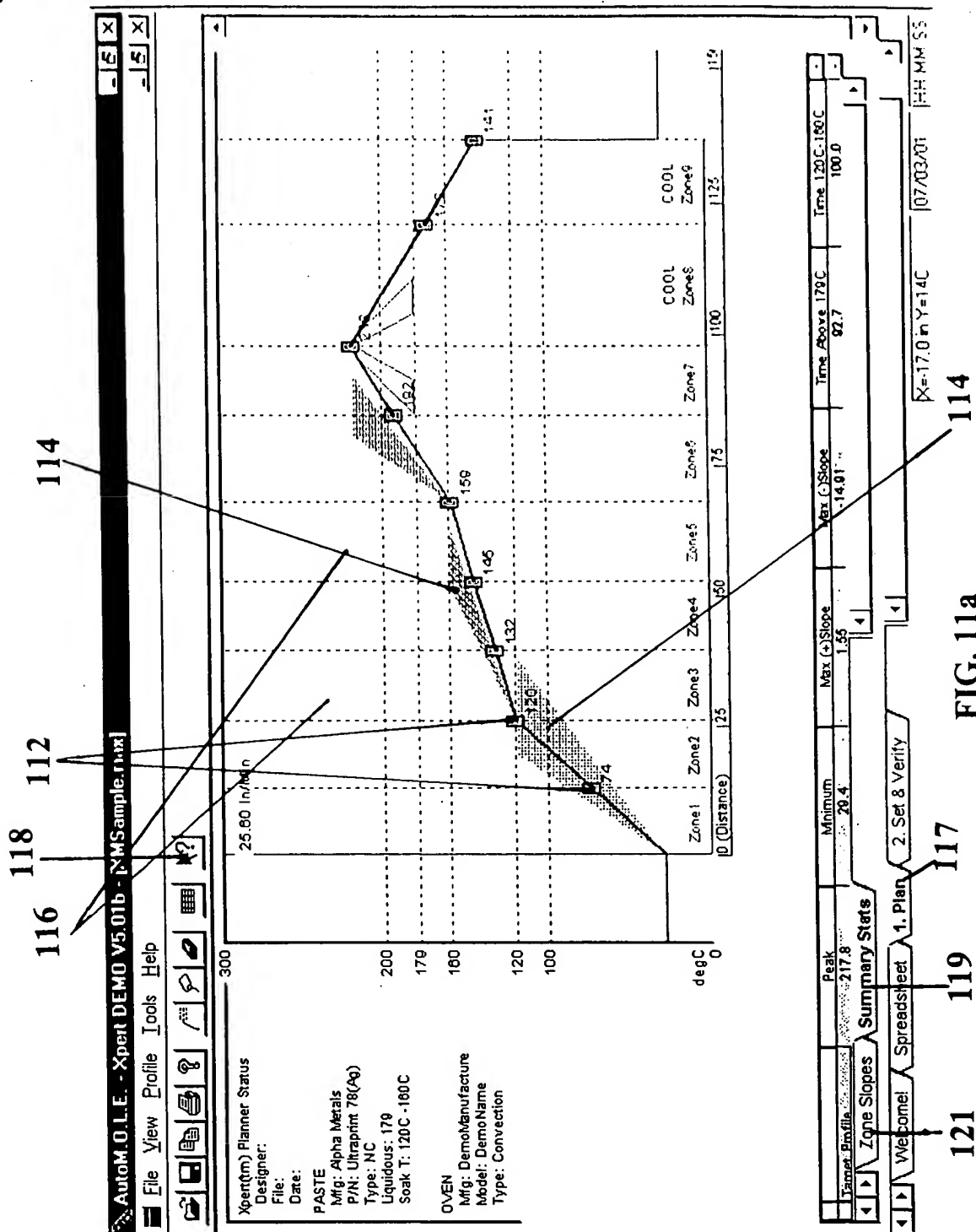
119

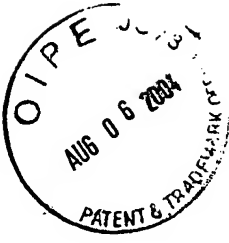
117

121

110

FIG. 10



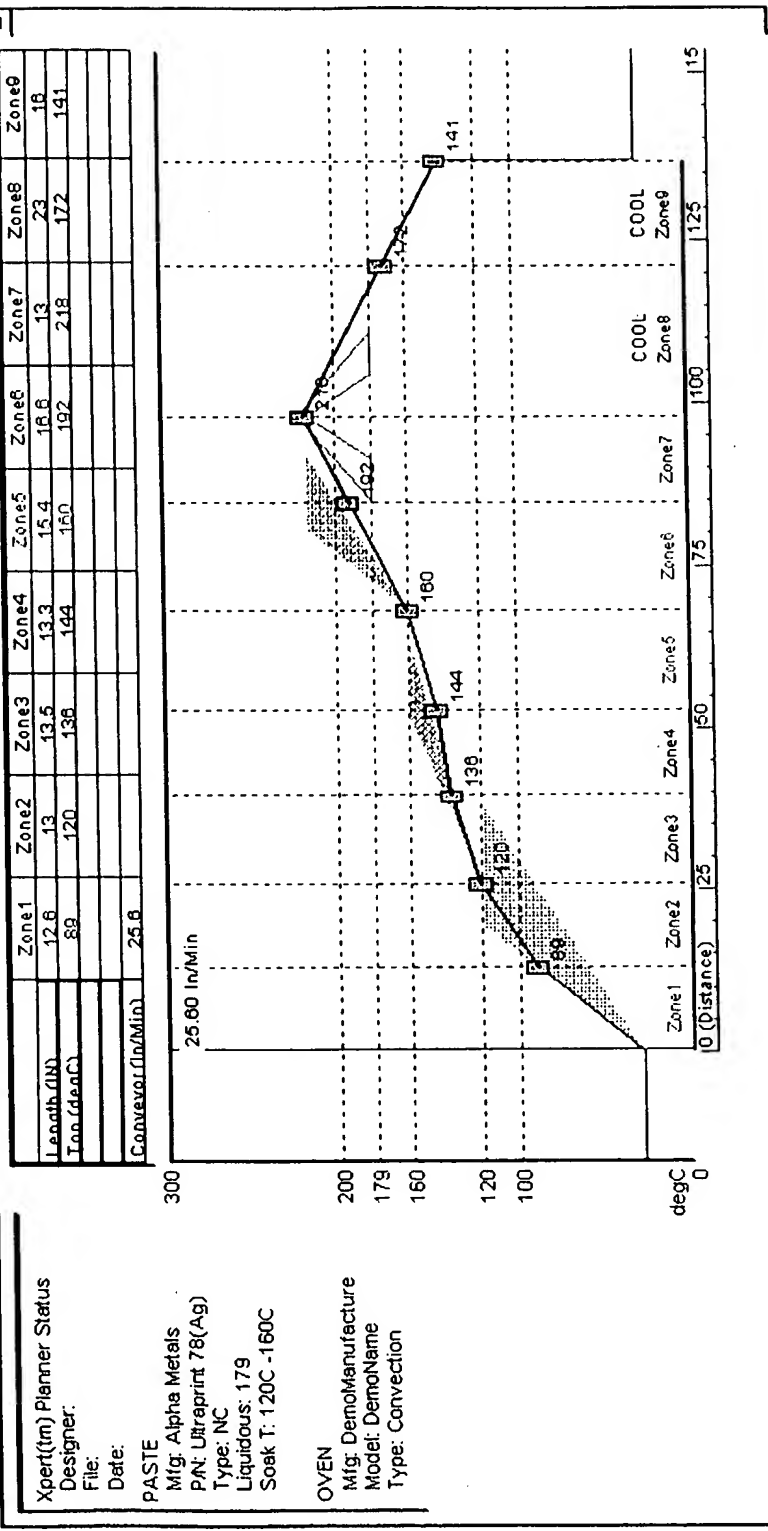


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File View Profile Tools Help



Target Profile

Zone Slopes Summary Stats

|                   | Zone1 | Zone2 | Zone3 | Zone4 | Zone5 | Zone6 | Zone7 | Zone8 | Zone9 |
|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Length (in)       | 12.6  | 13    | 13.5  | 13.3  | 15.4  | 16.6  | 13    | 23    | 18    |
| Temp (degC)       | 89    | 120   | 138   | 144   | 160   | 192   | 218   | 172   | 141   |
| Conveyor (in/Min) | 25.8  |       |       |       |       |       |       |       |       |

1. Plan

2. Set & Verify

3. Run

4. Summary

5. Welcome!

6. Spreadsheet

X=86.4 Y=298C

05/01/01

HH:MM:SS

FIG. 11b

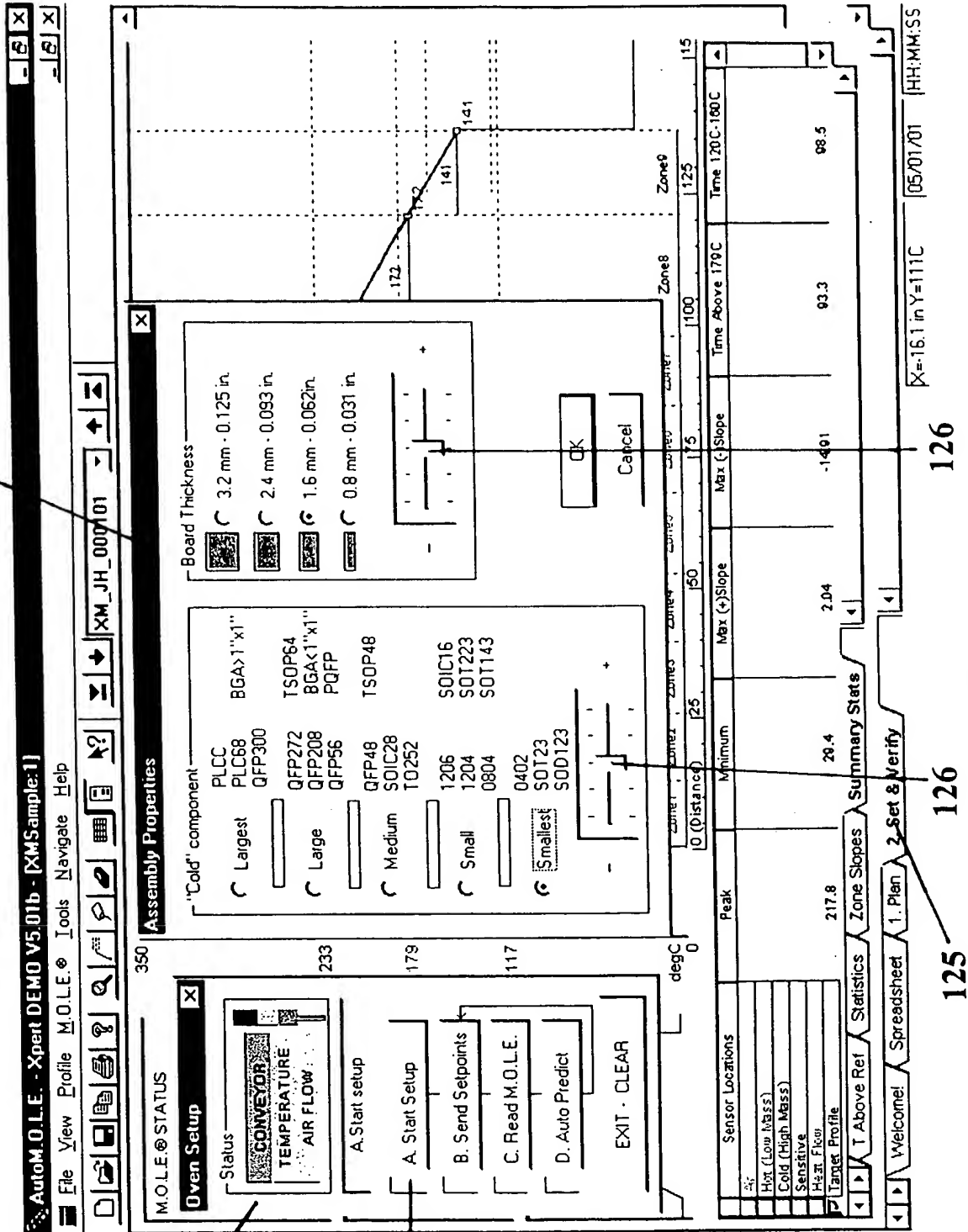
120

117

119

121

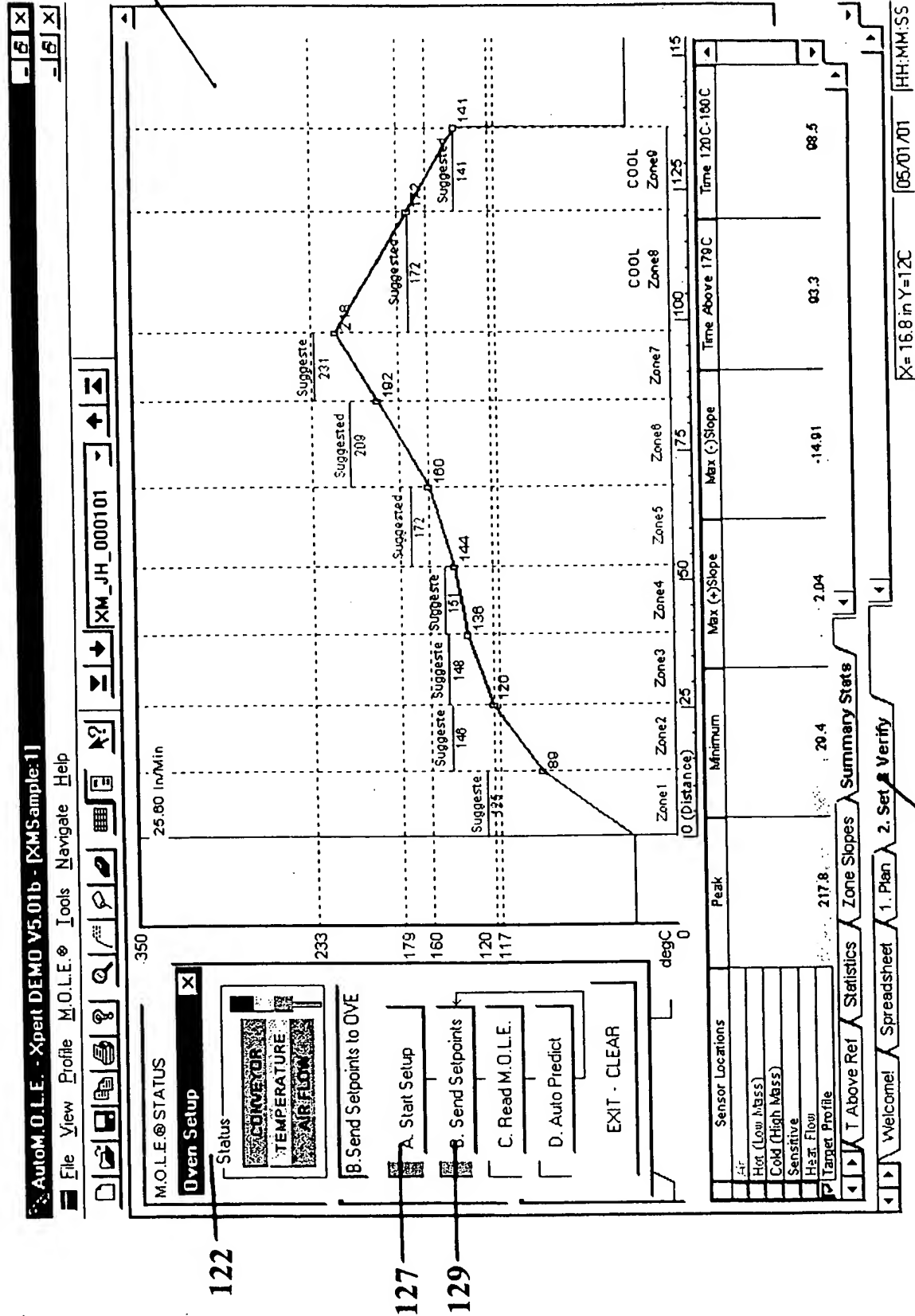
124



**FIG. 12**

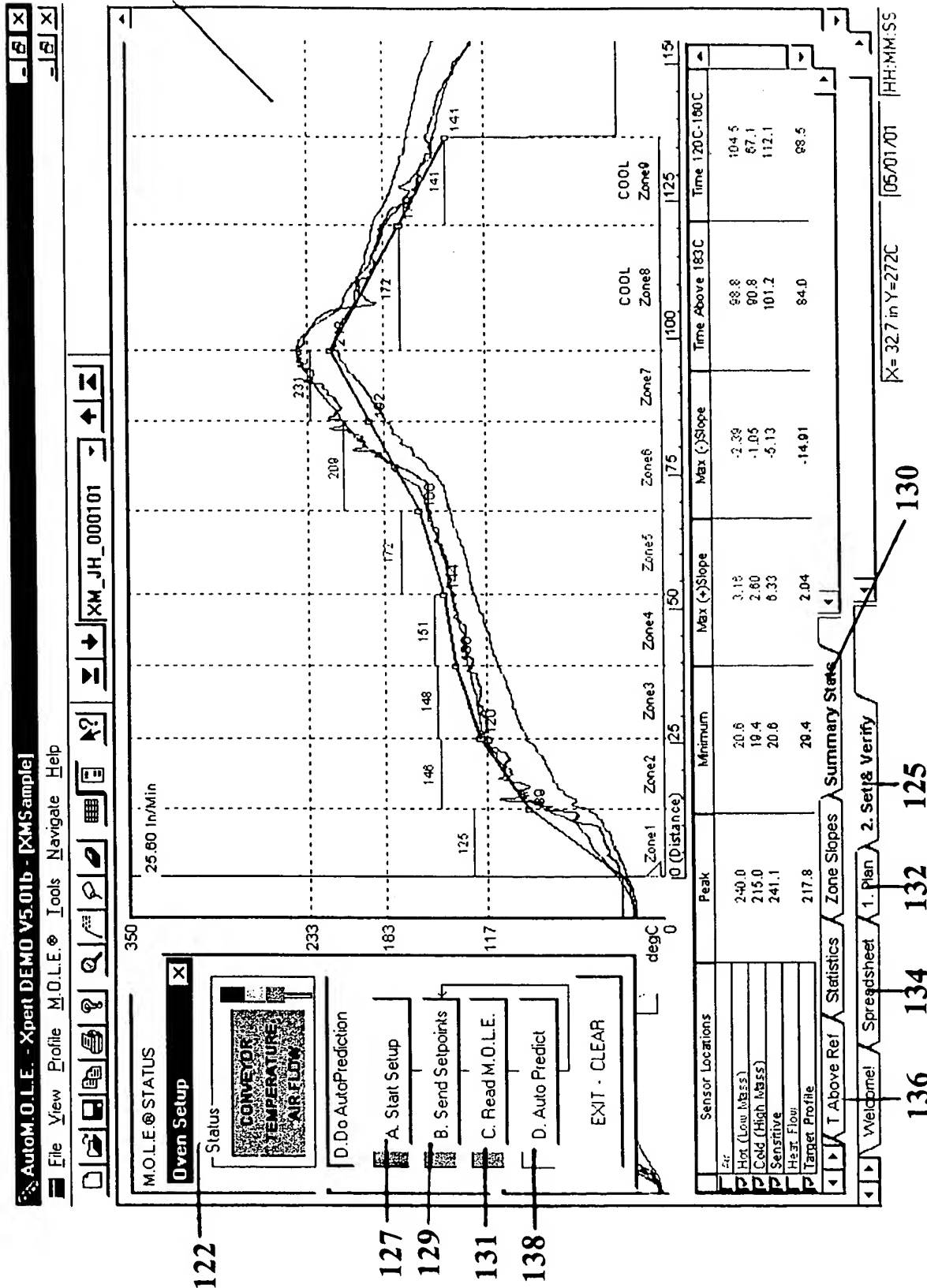


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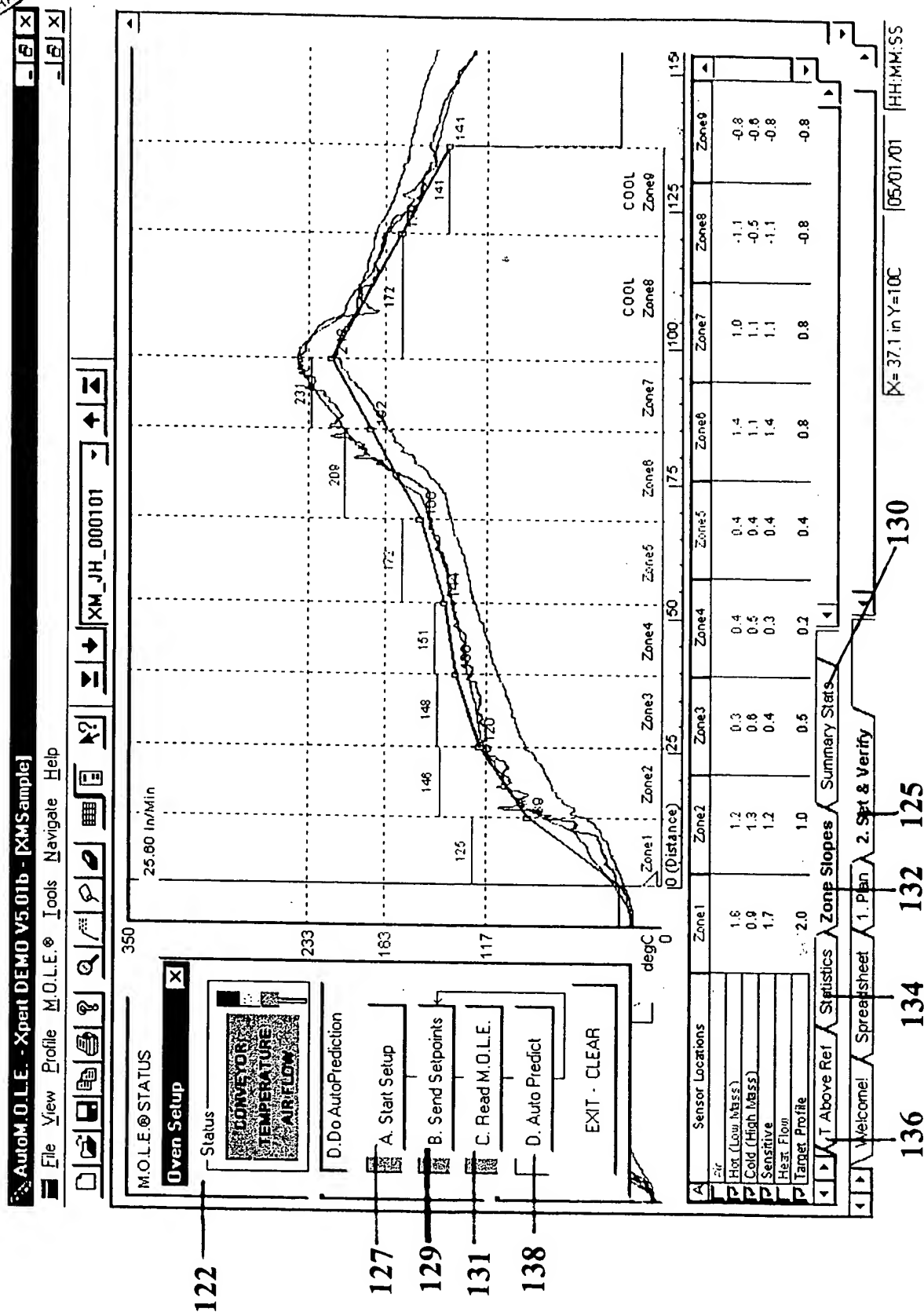
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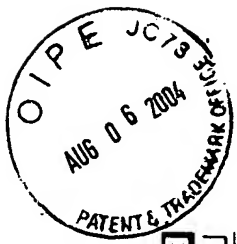






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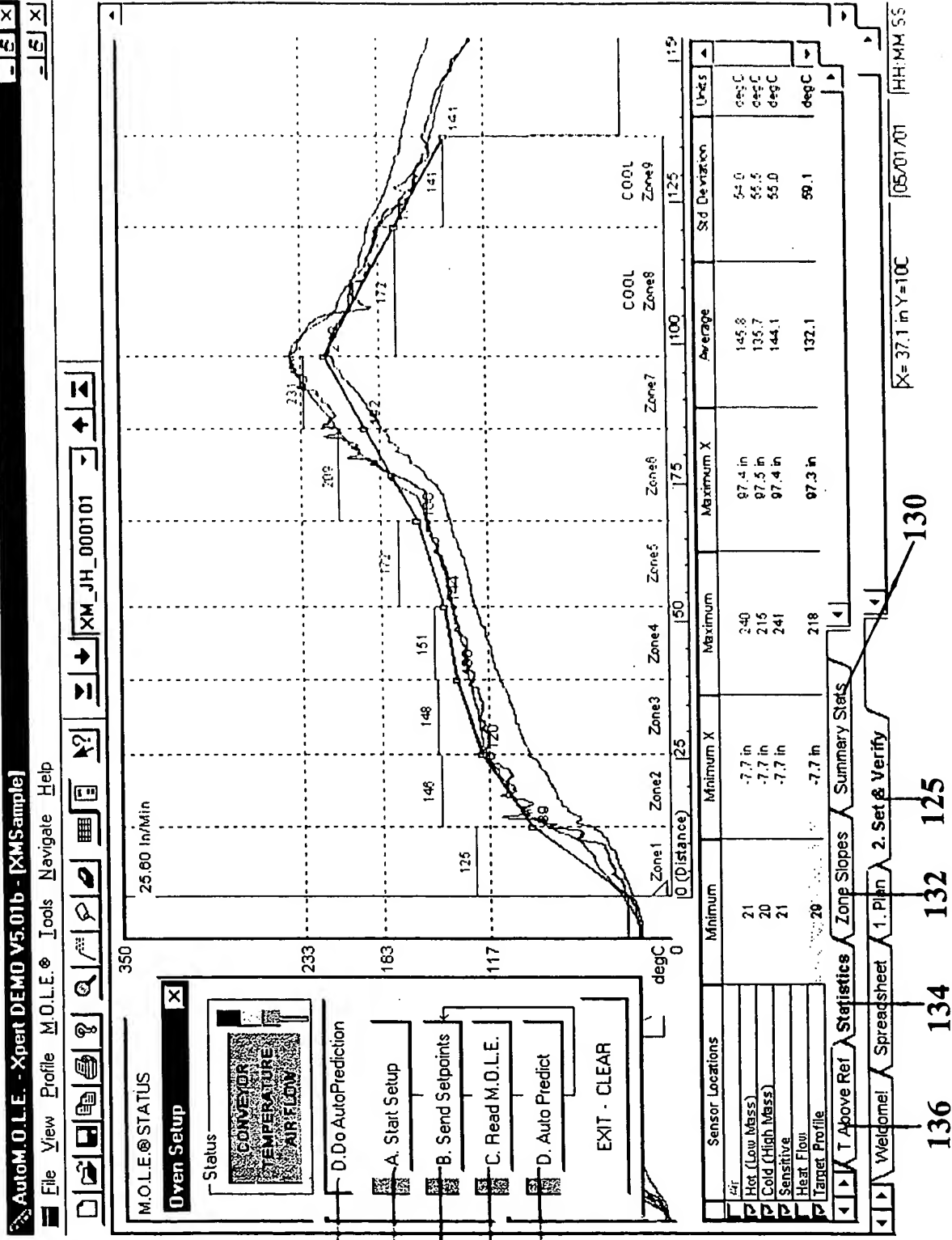


FIG. 16



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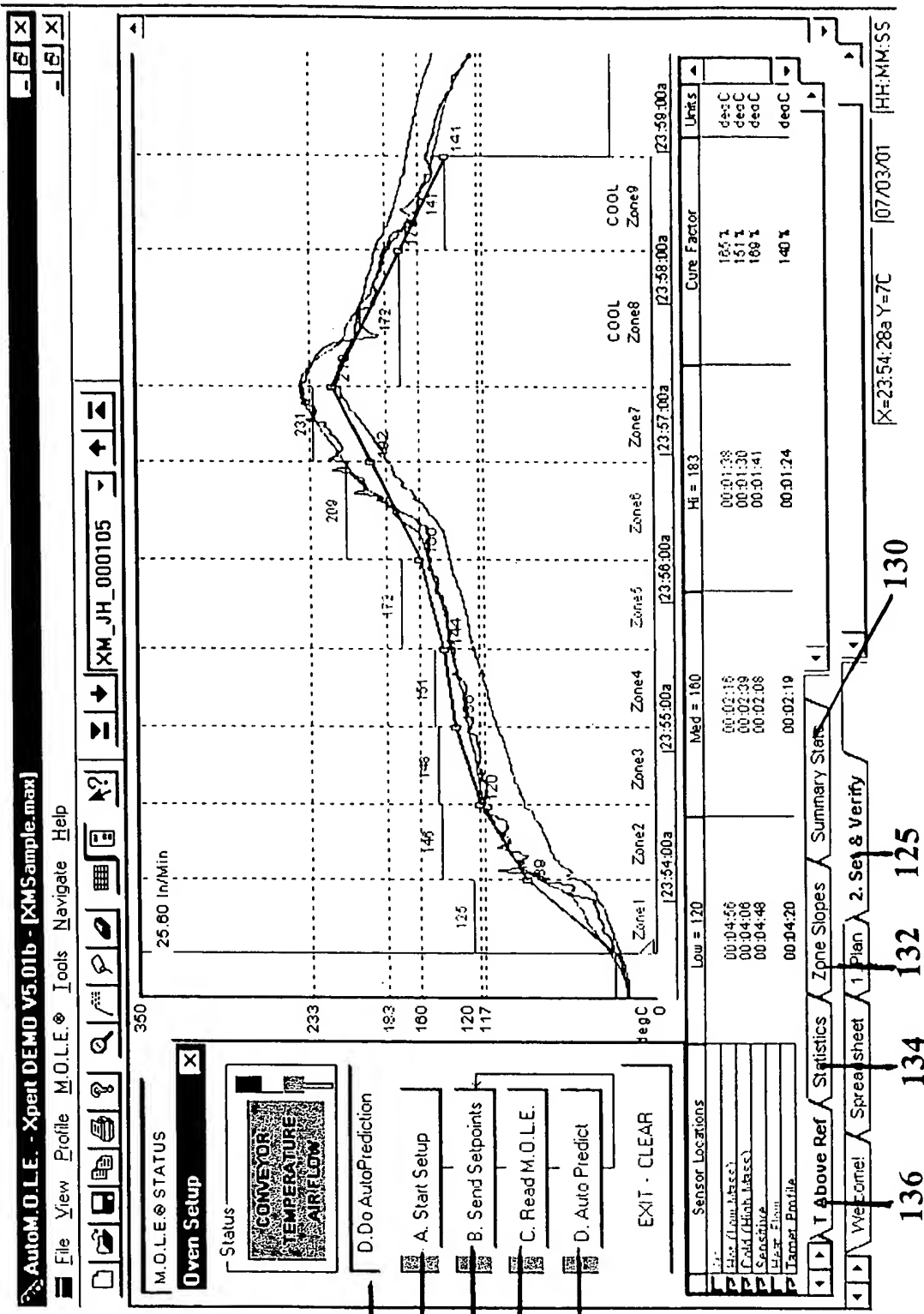


FIG. 17



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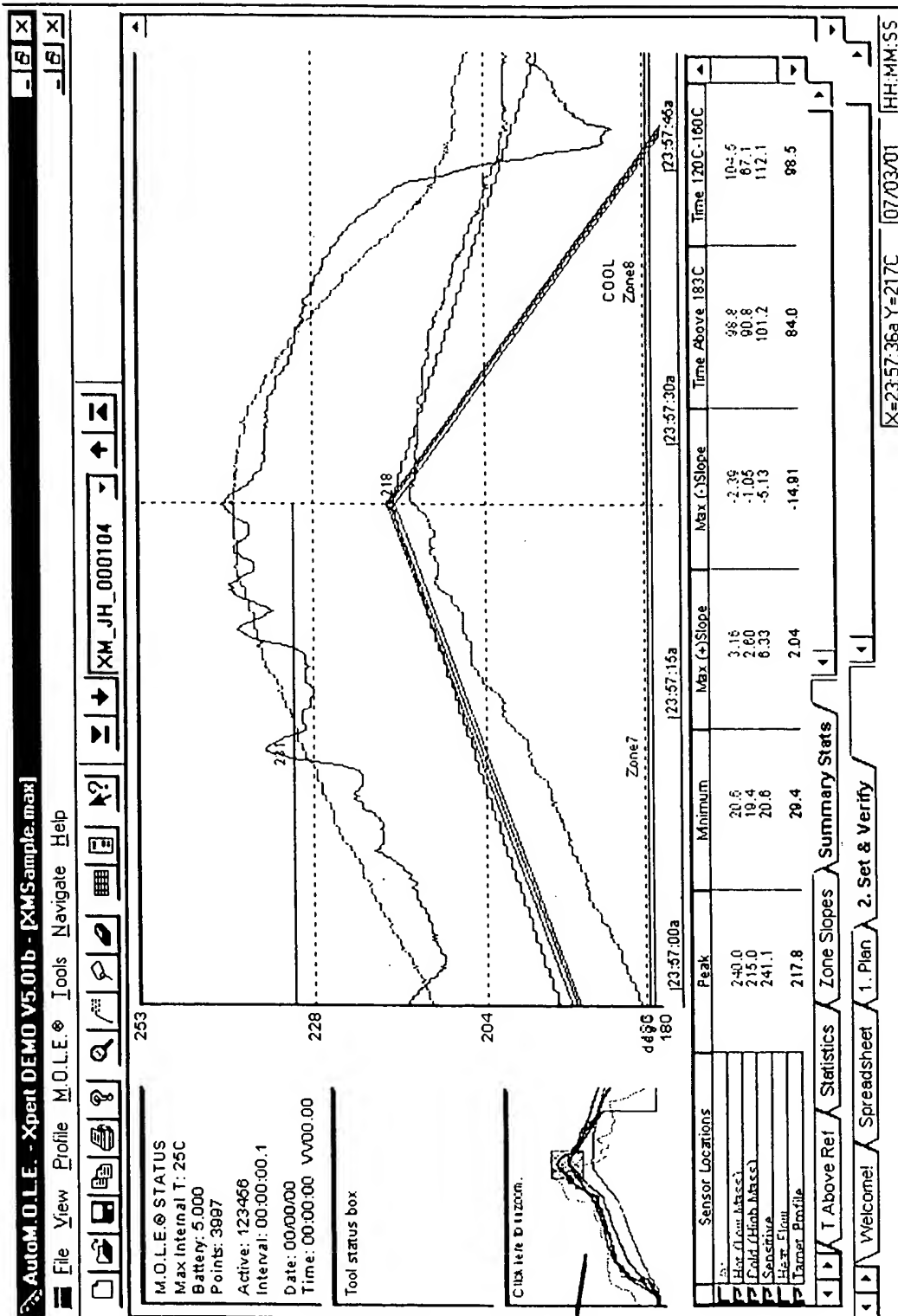
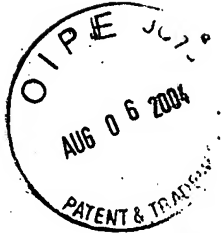
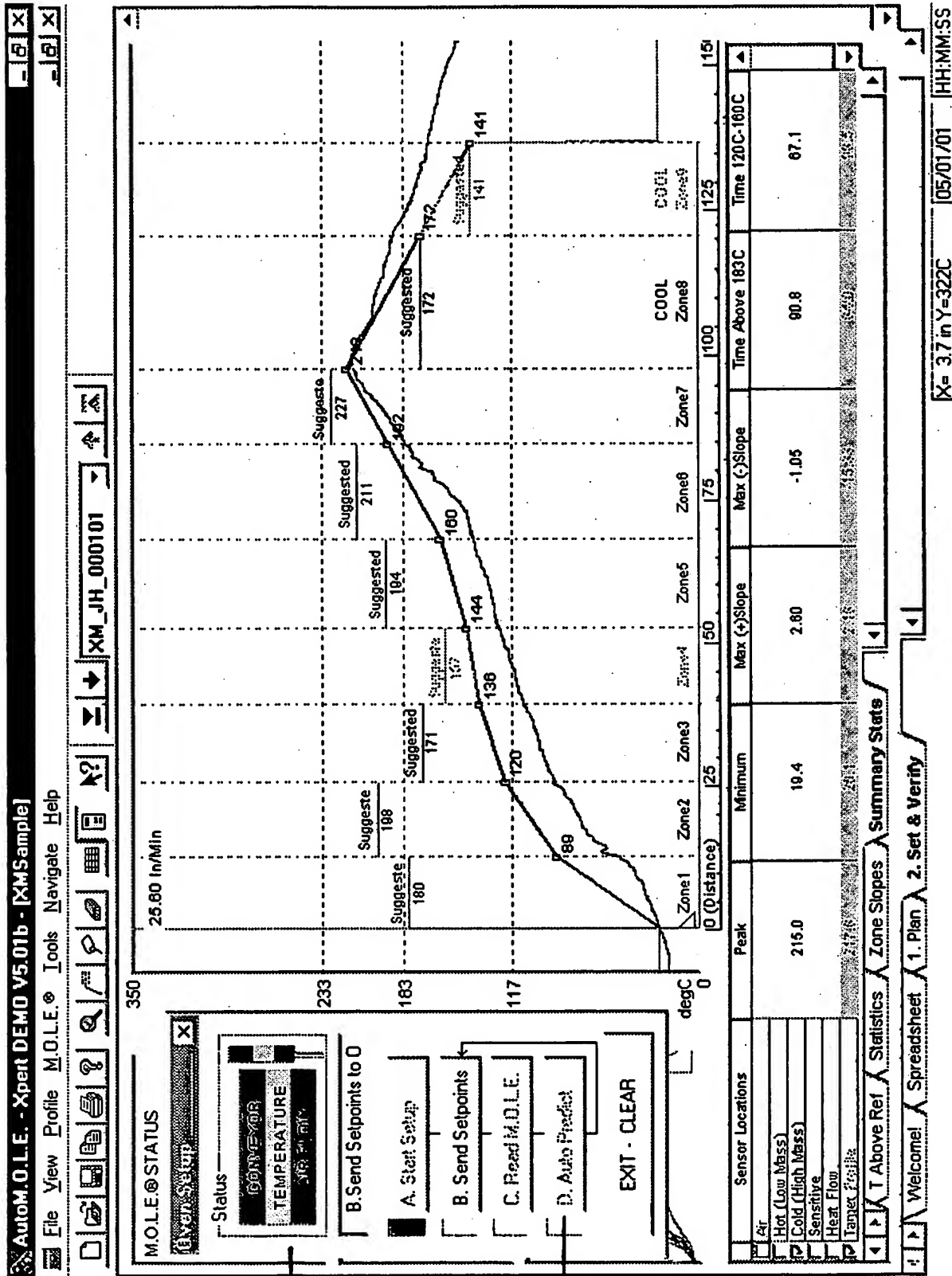


FIG. 18



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FIG. 19